

Infection Control and ART in Humanitarian Missions



59th Dental Squadron
Wilford Hall USAF Medical Center
Lackland AFB, TX

Carlos Esquivel

Col, USAF, DC

- Contributions by:
 - Dr. Jo E. Frencken
 - Dr. Christopher J. Holmgren
 - Col Shannon Mills
 - Col (sel) Salvadore Flores
 - Col (sel) Page MacNall
 - Col (sel) Thomas Beckman
 - CDR Timothy M. Ryba
 - Lt Col Jennifer Harte
 - Many others that I have met on humanitarian missions

Overview

- Deployments
 - Humanitarian Missions (2-3 weeks)
- Infection Control in Humanitarian Missions
- Treatment of Dental Infections
 - Atraumatic Restorative Treatment (ART)

Deployments

- Wartime
- Peacekeeping
- Humanitarian
- Disaster Response



Humanitarian Missions

2-3 Week Deployments

- Promote goodwill and security interest of the U.S.
- Reinforce our alliance with the host nation
- Provide medical care in underserved areas
- Train the dental team to work in austere conditions



Humanitarian Missions

2-3 Week Deployments

- You will carry all your equipment
- Commercial carrier allows 2 pieces of luggage
- 70 lbs per piece
- Have team equipment



Mission Planning and Supplies

- Don't re-invent the wheel
- Talk to people who have done it before
- Plan carefully
- Get a feel for the mission
 - Oral Surgery?
 - Operative?
 - Preventive?
 - Infection Control



Infection Control

- Container 1 = Soap and Water
 - Remove all debris
 - Use heavy-duty utility gloves
- Container 2 = Rinse
- Container 3 = liquid-chemical germicide
 - » sterilant or high level disinfectant
 - Follow product instructions
- Container 4 = Rinse



Infection Control

- Sterilizer
- Use of pressure cooker
 - Provide heat source
 - Add clean water 2-3 cm from bottom—boil
 - Steam—weight in place—heat for 15 minutes
 - Allow to cool before opening
 - Remove instruments



Infection Control

- Immunizations
- PPE
- Operator Equipment
 - Headlamp
 - Extension Cord/Batteries
 - Antimicrobial Soap
 - Alcohol-based hand rub
 - Barriers
 - Surface disinfectant



Management Of Caries

- Infectious disease
- Arrest the disease process
- Extractions
- Atraumatic Restorative Treatment (ART)
 - Arrest the disease process
 - » Removal of cariogenic biomass
 - » Seal & protect tooth
 - » Place an adhesive restorative material



Atraumatic Restorative Treatment ART

- Caries Removal
- Hand Instruments
- Restore with an adhesive material
- No local anesthesia
- No high/low handpiece
- No suction
- No water



ART Indications



- Limited access to traditional care
- Pediatric & Geriatric care
- High caries risk management
- Extreme dental fear/anxiety management

Armamentarium

- Instruments

- Mouth mirror
- Cotton Forceps
- Explorer
- Small spoon excavator
- Medium spoon excavator
- Dental hatchet



Armamentarium

- Instruments

- Glass slab
- Spatula
- Carver
- Applicator
- Light Source



Armamentarium

- Materials
 - Dentinal Conditioner
 - Petroleum jelly
 - Wedges
 - Plastic matrix
 - Clean Water
 - Gloves
 - Cotton rolls/pellets



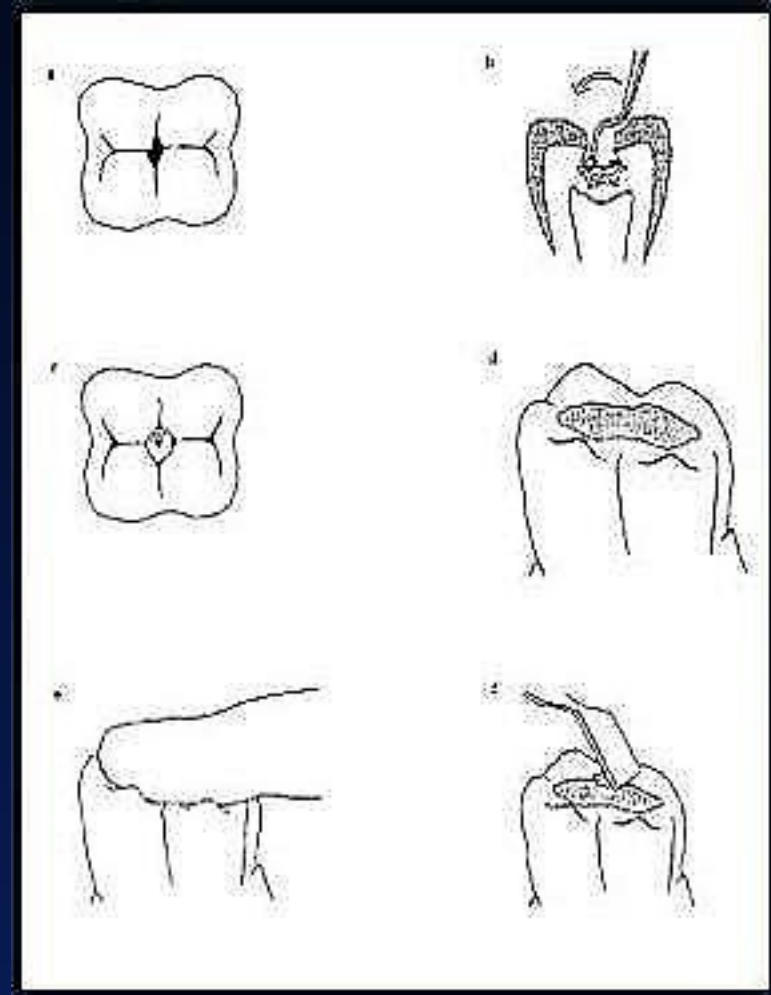
Armamentarium

- Materials
 - High-viscosity, auto-cure glass ionomer
 - Examples
 - » Fuji IX (GC America)
 - » Ketac Molar (3M ESPE)



Procedure

- Isolate
- Access
- Excavate
- Condition
- Insert
- Press
- Remove excess



Procedure



Procedure....Isolate



Procedure....Clean Surface



Procedure....Widen Entrance



Procedure....Remove Caries



Procedure....Pulp Protection



Procedure....Clean Preparation



Procedure....Condition



Procedure....Mix Restorative Material



Procedure....Place Glass Ionomer



Procedure....Place coated gloved finger on occlusal surface a light pressure



Procedure....Check Occlusion



Procedure....Remove Excess Material



Procedure....Recheck Occlusion Adjust PRN



Procedure....Cover restoration
with varnish, unfilled resin,
petroleum jelly



Procedure....Instruct patient not to eat for at least an hour



Keys to a Successful Mission

- Know your mission before you go
- Be prepared
- Have a good attitude

Questions/Comments

Call Col Esquivel
DSN 945-7141